

REMARKS

Claims 5, 7, 11 – 12, and 15 – 16 have been cancelled. Claims 1, 10, 20, and 21 have been amended to clarify the subject matter regarded as the invention. Claims 23 – 28 are new. Claims 1 – 4, 6, 8, 10, 13 – 14, and 17 – 28 are pending.

Independent claims 1 and 20 – 21 have been rejected under 35 U.S.C. §102(b) as being anticipated by St. Pierre et al. (hereinafter referred to as St. Pierre).

Independent claims 1 and 20 – 21 have been amended to recite “determining an offset, from a beginning of a collection of records, indicating where a record associated with the file system element is located within the collection of records, wherein the record includes metadata that identifies one or more locations of data blocks on storage that comprise the file system element; using the determined offset to retrieve the record from the collection of records on a storage device; and restoring the file system element by accessing the data blocks that comprise the file system element from storage at the one or more identified locations.” For convenience and without limitation, Figure 4 shows an embodiment of a collection of records; if a certain file is desired, an offset is determined indicating where a record associated with that file is located (e.g., an offset of 2800), and the record (e.g., record 300c) is retrieved using the determined offset. The locations of the data blocks that comprise the desired file are included in the record (see, e.g., page 8, lines 1 – 3).

By using the techniques recited in claims 1 and 20 – 21, shorter restoration times occur. As described in page 7, lines 19 – 20, records are received in unpredictable order and have varying sizes. Instead of going through an entire collection of records to find a desired one during restoration (and worst case, the desired one is the last one in a collection of millions of records), the technique recited in claims 1 and 20 – 21 determines the offset of a record and uses the determined offset to retrieve the record.

In Col. 6, lines 27 – 63, St. Pierre describes a restoration technique which includes “a mapper to receive information identifying [sic] which of the physical segments in the primary copy have been changed since the target time and to identify corresponding copies of the changed segments in the backup memory system.” St. Pierre does not specifically describe performing mapping by “determining an offset, from a beginning of a collection of records,

indicating where a record associated with the file system element is located within the collection of records, wherein the record includes metadata that identifies one or more locations of data blocks on storage that comprise the file system element; using the determined offset to retrieve the record from the collection of records on a storage device; and restoring the file system element by accessing the data blocks that comprise the file system element from storage at the one or more identified locations.”

Claims 2 – 4, 6, 8, 10, 13 – 14, 17 – 19, and 22 – 28 each depend from one of claims 1 and 20 – 21 and are believed to be allowable for the same reasons described above.

The foregoing amendments are not to be taken as an admission of unpatentability of any of the claims prior to the amendments.

Claims 23 – 28 are new. For convenience and without limitation, support for claims 23 – 25 can be found in Figure 7A (see, e.g., steps 700 and 702) and page 11, lines 5 – 12 and support for claims 26 – 28 can be found in Figure 2 and page 14, lines 13 – 16.

Reconsideration of the application and allowance of all claims are respectfully requested based on the preceding remarks. If at any time the Examiner believes that an interview would be helpful, please contact the undersigned.

Respectfully submitted,

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